Engineering for a Better World
FEEZOR
ENGINEERING, INC.

March 12, 2002

Ms. Joyce Munie
Manager of Permit Section
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, IL 62794

Re: Pagel Landfill – Rockford, Winnebago County, IL
IEPA Site #2018080001
Permit #1991-138-LF
Construction Quality Assurance Acceptance Report Pagel Landfill Final Cover Construction – Eastern Portion
Log Number 2001-360

Dear Ms. Munie:

On behalf of our client, Winnebago Reclamation Service, Inc. (WRS), Feezor Engineering, Inc. (FEI) hereby submits additional information to address the March 7, 2002 draft denial for the above referenced application. The draft denial comment is listed first, which follows the appropriate response.

1) *Section 1, Introduction - The constructed design in this application has not been previously approved. The applicant needs to acknowledge this and propose this design for the Northern Unit.*

Response On behalf of our client, WRS hereby requests that the constructed design be approved. This includes the stormwater modifications as discussed in Section Section 2.3 of the above referenced application. This also includes the final topography as illustrated on drawings 002 and 004 of the above referenced application. In addition, the final cover configuration and the leachate and gas collection and management system is hereby proposed for the permitted design, for the North Unit.

2) *Section 4.2, FML Properties – There are certifications from Serrot missing that are represented on the table describing the certification properties. For example. roll # 19091B is identified in the table, but there are no Serrot testing results provided. Please provide the missing Serrot certifications.*

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Response Serrot uses a procedure in which each roll tested certifies itself plus the two preceding rolls, for 40 mil FML. Therefore, roll number 19091B was actually certified by roll number 19093B. This certification was provided in Sub- Appendix C.1.(actual roll number was 684D00-19093B). The Geosynthetic Inventory in Sub-Appendix C.3 lists the roll number, and under the comment section, which roll number was used to certify the actual roll, based upon the Serrot system. If there is not a roll number under the comment section, then the actual roll certified itself. An explanation from Serrot has been included with this correspondence.

3) *Section 7 – Dual Leachate and Gas Collection System Installation – The completed design shown on Drawing 8 and 10 has not been previously approved. The applicant needs to acknowledge this and propose this design for the Northern Unit. The management of condensate has not been discussed.*

Response: On behalf of WRS, request is hereby made to permit the constructed as built dual gas and leachate collection system as shown on drawings 008 and 010, as the final permitted system. Condensate, along with the pumped leachate, will flow to the low area of the header along the east side of the landfill. This condensate and leachate will enter the dual contained 8"x 4" pipe via a 12"x 8" cross at an elevation of 784.92 feet Mean Sea Level (M.S.L.). This combined leachate and condensate will be conveyed by gravity to the above ground leachate storage tank, which will enter the top of the tank at an elevation of 766.01 feet M.S.L. The low point of the dual contained piping is 755.45 feet M.S.L. Therefore, the driving head will be 18.91 feet, while the static head to resist the gas vacuum in the line will be 10.56 feet. The dual contained piping will serve as a "U-Tube" type of vacuum lock.

4) *Drawing 4, Final Cover Thicknesses – Please provide the field notes for each core taken to verify the depths of the low permeability layer, the protective cover, and the topsoil.*

Response: There were no independent field notes for the cores taken to verify the depths of the layers other than the electronic file presented on drawing 004. The CQA Officer in absentia uses a field laptop computer and the data is entered electronically as it is obtained. Within the Daily Field Reports, the process of this depth checking is explained for the low permeability layer and the protective soils. Please see the following reports: Report #14 (8/30/00), Report #15 (8/31/00), Report #16 (9/1/00), Report #30 (9/28/00), Report #31 (9/29/00), Report #33 (10/31/00), Report # 116 (4/16/01), Report # 120 (4/20/01), Report # 126 (4/27/01), Report # 129 (4/30/01), Report # 138 (5/11/01), and Report # 141 (5/16/01).

5) *Drawing 5, Final Cover Thicknesses – There are locations that have a topsoil depth of less than six inches.*

Response: The topsoil layer and the protective layer as described in the table on drawing 004, constitutes the Final Protective Layer as defined in 35 IL. Admin. Code 811.314 c). The nomenclature used in the field was a matter of convenience to discern between two

separate materials being used. However, when combined, the Final Protective Layer is at least 3.1 feet in all locations. Both materials used are capable of supporting vegetation, and when combined, meets the thickness requirements of 35 IL. Admin. Code 811.314 c) 2).

6) *Appendix G – Closure and Post Closure Cost Estimates – Please explain why the annual leachate monitoring costs and leachate treatment costs have decreased from the previously approved cost estimates. The Southern Unit closure cost estimate should be calculated using the total area of the Southern Unit.*

Response: The leachate monitoring costs have been reduced due to the selection of a different analytical service provider. PDC Laboratories, Inc. is currently providing this service. Their July 13, 2001 quotation has been provided for your consideration. In addition, the leachate treatment costs are currently $0.002 per gallon with the Rock River Water Reclamation District.

To address the final point of this comment, WRS provides funding for the Closure Cost Estimates for the "Assumed Closure Date" which would consist of the point of maximum exposure, as defined by 35 Ill. Admin. Code 811.700 e). Currently, this is 18.6 acres for the South Unit. When additional landfill areas are developed, WRS will revise the Closure Cost Estimates accordingly.

This additional information should address the comments in the March 7, 2002 draft denial. If you have any questions or comments, please contact Mr. Thomas Hilbert at (815) 381-5646.

Sincerely,

Daniel R. Feezor, P.E.
President

Attachments

Cc: Thomas Hilbert w/ Attachments
Bernard J. Schorle – USEPA w/Attachments

Columbia Geosystem's computerized data base program controls all inventory for production rolls and QA/QC data. Our customers will receive from us the following standard documentation covering all pertinent information for the project unless otherwise requested.

#1 SHIPPING PACKING LIST (Bill of Lading)
This list contains nominal thickness, resin code, a five digit roll number, roll weight, square footage and dimensions. The shipping packing list was designed to assist our shipping department in quickly viewing nominal thickness and resin code against the ordered materials. The Q.C. stamp at the bottom of the page indicates that our Quality Control Department has checked the load for any damage to the product and verifies the correctness of loaded material versus the order.

2 POLYETHYLENE CERTIFICATE OF ANALYSIS
This certifies the relevant test methods, resin specifications, resin supplier lot number, Columbia's resin batch designation number and resin test results as verified in our laboratory.

3 GEOMEMBRANE CERTIFICATE OF ANALYSIS
This certifies the test methods, minimum test values and frequency of geomembrane testing.

4 GEOMEMBRANE STANDARD TESTING CERTIFICATION
This provides a listing of test roll numbers and all relevant test results from our laboratory. Each test roll listed certifies manufactured rolls based on nominal thickness and full length rolls. Columbia's test frequency is based on a maximum of 50,000 ft² rounded to the nearest full roll.
*For 20 mil - the test roll will certify itself.
*For 30 mil - the test roll will certify itself and the preceding roll (based on full length rolls).
*For 40 mil - the test roll will certify itself and the preceding two rolls (based on full length rolls).
Example, if the test roll is #42355 then it will certify itself and rolls 42354 + 42353
*For 60 mil - the test roll will certify itself and the preceding three rolls (based on full length rolls).
*For 80 mil - the test roll will certify itself and the preceding four rolls (based on full length rolls).
*For 100 mil - the test roll will certify itself and the preceding four rolls (based on full length rolls).

The test results, where applicable, will be recorded as averaged values. The roll numbers located on the geomembrane testing certification can be deciphered as follows:

ex. 623A00-42355
623A00-16475B

623 - first three digits refer to Columbia's resin batch designation number. This corresponds to the resin batch designation number located on the polyethylene certificate of analysis.
A00 - refers to the shift number and the year of production.
42355 - refers to the consecutive roll number produced on Line A.
16475B - refers to the consecutive roll number produced on Line B.

Note: Rolls that appear on the geomembrane standard testing certification may not appear on the shipping packing list. This is due to a test roll certifying an actual shipped roll which falls within its testing group.

Analytical Cost Summary
WINNEBAGO RECLAMATION SERVICE
Pagel Pit
July 13, 2001

Location ID	Unit Cost	Sample Points	Quarters	Annual Cost
North Unit – GW	$ 162.50	35	4	$ 22,750.00
	$ 914.45	35	1	$ 32,005.75
South Unit – GW	$ 162.50	19	4	$ 12,350.00
	$ 1,034.75	19	1	$ 19,660.25
North Unit – Leachate	$ 266.50	6	4	$ 6,396.00
	$ 751.50	6	1	$ 4,509.00
South Unit – Leachate	$ 266.50	2	4	$ 2,132.00
	$ 751.50	2	1	$ 1,503.00
		Total Annual Cost		***$ 101,306.00***

Note: Add $73.25 per sample when Appendix II is required during 2nd quarter.

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